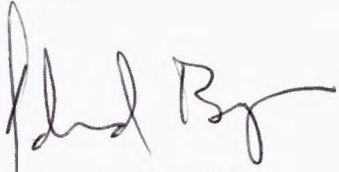


# DOCUMENT CONTROL LIST

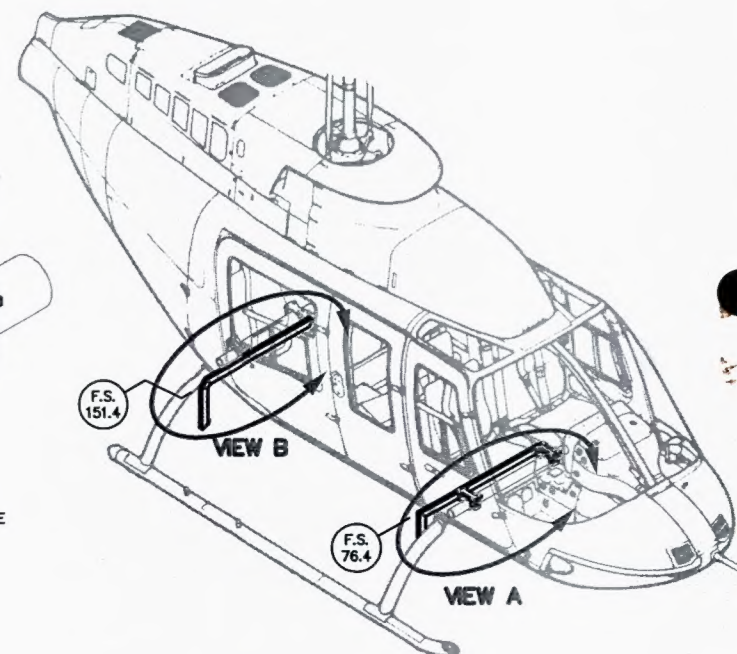
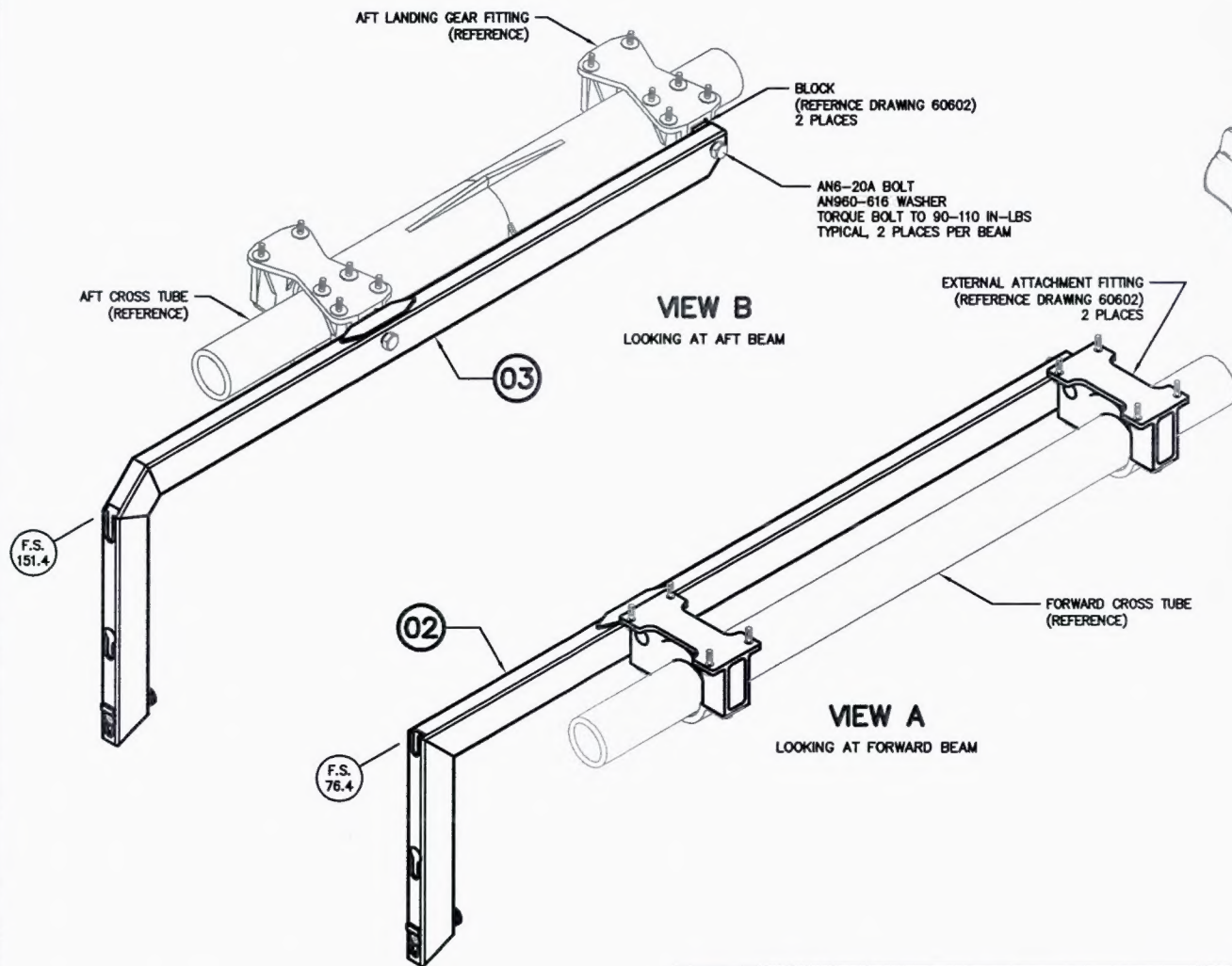
DOCUMENT NO.	DOCUMENT CONTENT	REVISION
<b>INSTALLATION DOCUMENTS</b>		
70101	Quick Release Cargo Basket Installation	4 ✓
70102	Quick Release Mounting Provisions Installation	0 ✓
ICA698.90	Instructions for Continued Airworthiness	2 ✓
FMS701.90	Flight Manual Supplement	3 ✓
SI698.91	Service Instructions – Sliding Door Modification	0 ✓
<b>FABRICATION DOCUMENTS</b>		
DCL698-1	Document Control List for Quick Release Cargo Basket	2 ✓
DCL698-2	Document Control List for Beams	4 ✓
APPROVAL:	ORIGINAL DATE: 10 May, 2006	<b>AERO DESIGN LTD.</b> 2013 – 39 <sup>th</sup> Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333
	REVISION DATE: 27 October, 2011	
	SHEET 1 OF 1	<b>Bell 407</b> <b>Quick Release Cargo Basket</b> <b>Installation</b>
	<div>DCL701</div> <div>Rev. 4</div>	

*emailed*

# FORM AE-100

DEPARTMENT OF TRANSPORT STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS		AE-100 No.: AE701 Initial Issue Date: 25 May, 2006  Revision: 3 Revision Date: 25 March, 2009  Approval No.: SH00-48  Delegation No.: 290M Delegate Name: E. Burgoin Classification of Designee: Employer: AERO Design Ltd.	
Aircraft Mfr: Bell Aircraft Model: 407 Registration: All Eligible	Model Type Airplane <input type="checkbox"/> Helicopter <input checked="" type="checkbox"/> Appliance <input type="checkbox"/> Component <input type="checkbox"/>		
LIST OF APPROVED REPORTS AND DATA			
Document Number		Document Title	Compliance Status
DCL701 70101 70102	Revision 3 Revision 3 Revision 0	Document Control List and all documents referred to therein Quick Release Cargo Basket Installation Quick Release Mounting Provisions Installation	
		DATA APPROVED BY TRANSPORT CANADA	
FMS701.90	Revision 2	Flight Manual Supplement	
CERTIFICATION  UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED Nil HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIRMENTS.			
I THEREFORE <input type="checkbox"/> RECOMMEND FOR APPROVAL OF THESE DATA <input checked="" type="checkbox"/> APPROVE THESE DATA			
 E. Burgoin, DAR 290M			





# 01 INSTALLATION

				APPROVALS	DATE	<b>AERO DESIGN LTD.</b> CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M 2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027      fax: (403) 250-8333      aerodesign@telusplanet.net												
4	AN960-616		WASHER	DRAWN:	JEFF CLARKE	15 JULY 2008	<b>BELL 407</b> <b>QUICK RELEASE MOUNTING PROVISIONS</b> <b>PROVISIONS INSTALLATION</b>											
4	AN6-20A		BOLT	CHECKED:	E. BURGOIN													
1	73031-02	03	AFT BEAM (ALTERNATE)	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS                      ANGLES X.XXX    ±0.010                      ±1/2° X.XX     ±0.03 X.X      ±0.1			<table><tr><td>NOT TO SCALE</td><td>DWG. SIZE</td><td>DWG. NO.</td><td>REV.</td></tr><tr><td>SHEET 1 OF 2</td><td>A4</td><td>70102</td><td>0</td></tr></table>				NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.	SHEET 1 OF 2	A4	70102	0
NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.															
SHEET 1 OF 2	A4	70102	0															
1	69831-02	03	AFT BEAM (ALTERNATE)															
1	69831-01	03	AFT BEAM															
1	73030-02	02	FORWARD BEAM (ALTERNATE)															
1	69830-02	02	FORWARD BEAM (ALTERNATE)															
1	69830-01	02	FORWARD BEAM															
1	70102-01	01	INSTALLATION															
01	PART NO.	ITEM	DESCRIPTION															
QTY.	LIST OF MATERIALS																	

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE	BJC	JULY 15/08

NOTES:

1. EXTERNAL ATTACHMENT PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 60602 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
2. HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
3. BEAMS (73030-01 AND 73031-01) ARE USED FOR INSTALLATION OF EQUIPMENT ON BOTH LEFT AND RIGHT SIDES. PROVISIONS FOR INSTALLING THE QUICK RELEASE CARGO BASKET (69810-01) ON THE RIGHT SIDE IS PROVIDED.

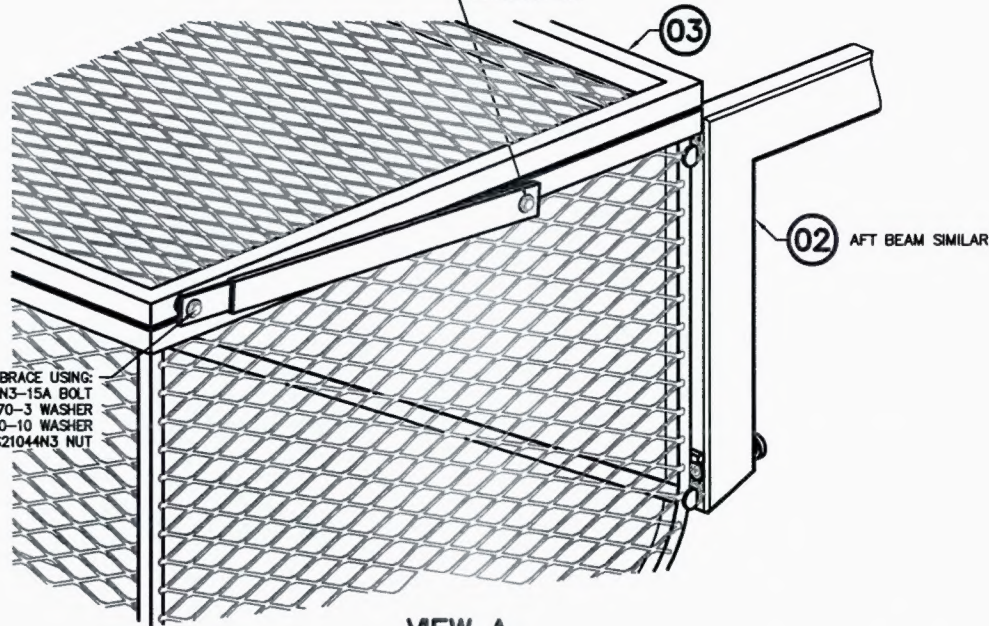
WEIGHT AND BALANCE						
ITEM	DESCRIPTION	WEIGHT (LB)	LONGITUDINAL		LATERAL	
			ARM (IN)	MOMENT (LB-IN)	ARM (IN)	MOMENT (LB-IN)
02	FORWARD BEAM	10.1	76.4	771.6	10.9	110.1
03	AFT BEAM	9.8	151.4	1483.7	12.6	123.5
01	MOUNTING PROVISIONS INSTALLATION	19.9	113.3	2255.3	11.7	233.6

THIS DRAWING CONTAINS INFORMATION AND DATA WHICH IS PROPRIETARY TO AERO DESIGN LTD. THIS DRAWING, OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER, NOR USED FOR MANUFACTURING WITHOUT THE WRITTEN CONSENT OF AERO DESIGN LTD. BY ACCEPTING THIS DRAWING FOR REFERENCE THE RECIPIENT AGREES TO HOLD AERO DESIGN LTD. HARMLESS FROM THE USE, OR MISUSE, OF THIS DRAWING OR THE INFORMATION CONTAINED THEREON.	APPROVALS		DATE		<div>AERO DESIGN LTD.</div> <div>CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M 2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027      fax: (403) 250-8333      aerodesign@telusplanet.net</div>													
	DRAWN: JEFF CLARKE		15 JULY 2008															
	CHECKED: E. BURGOIN				<div>BELL 407</div> <div>QUICK RELEASE MOUNTING PROVISIONS PROVISIONS INSTALLATION</div> <table><tr><td>NOT TO SCALE</td><td>DWG. SIZE</td><td>DWG. NO.</td><td>REV.</td><td></td></tr><tr><td>SHEET 2 OF 2</td><td>A4</td><td>70102</td><td>0</td><td></td></tr></table>				NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.		SHEET 2 OF 2	A4	70102	0	
	NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.														
	SHEET 2 OF 2	A4	70102	0														
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:																		
DECIMALS		ANGLES																
X.XXX ±0.010		±1/2"																
X.XX ±0.03																		
X.X ±0.1																		

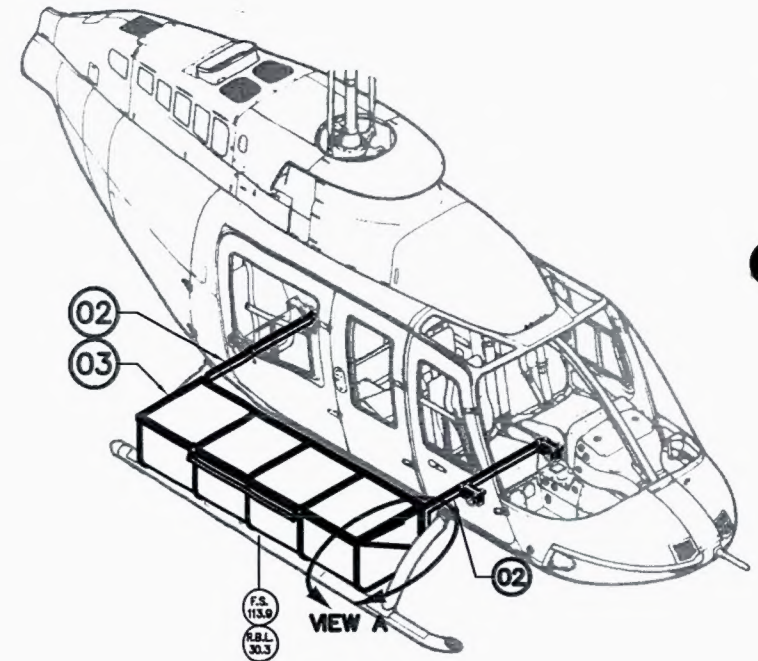


IF NECESSARY, INSTALL LID BRACE USING:  
AN3-17A BOLT  
AN970-3 WASHER  
AN960-10 WASHER  
MS21044N3 NUT

IF NECESSARY, INSTALL LID BRACE USING:  
AN3-15A BOLT  
AN970-3 WASHER  
AN960-10 WASHER  
MS21044N3 NUT



VIEW A  
TYPICAL FORE AND AFT



01 INSTALLATION

1	69810-01	03	CARGO BASKET ASSEMBLY
1	70102-01	02	PROVISIONS INSTALLATION
	70101-01	01	INSTALLATION
QTY.	PART NO.	ITEM	DESCRIPTION
LIST OF MATERIALS			

APPROVALS	DATE
DRAWN: JEFF CLARKE	17 APR 2006
CHECKED: E. BURGOIN	

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES.  
TOLERANCES ON:  
DECIMALS ANGLES  
X.XXX  $\pm 0.010$   $\pm 1/2^\circ$   
X.XX  $\pm 0.03$   
X.X  $\pm 0.1$

--- NOTICE ---  
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## AERO DESIGN LTD.

CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M  
2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7  
tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net

### BELL 407 QUICK RELEASE CARGO BASKET INSTALLATION

NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.
SHEET 1 OF 2	A4	70101	3



REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE	BJC	APR 17/06
1	UPPER BEAM ATTACHMENT CHANGED	BJC	NOV 09/06
2	ADD ELIGIBLE BEAM ASSEMBLIES	BJC	JUNE 29/07
3	DRAWING RESIZED, PROVISIONS MOVED TO DRAWING 70102	BJC	JULY 15/08

NOTES:




- EXTERNAL ATTACHMENT PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 60602 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION. QUICK RELEASE MOUNTING PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 70102 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- SEE FLIGHT MANUAL SUPPLEMENT, FMS701.90, FOR LIMITATIONS ON HELICOPTER OPERATIONS WITH CARGO BASKET INSTALLED.
- SEE INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, ICA698.90, FOR MAINTENANCE INFORMATION.
- BEAMS (73030-01 AND 73031-01) ARE USED FOR INSTALLATION OF EQUIPMENT ON BOTH LEFT AND RIGHT SIDES. PROVISIONS FOR INSTALLING THE QUICK RELEASE CARGO BASKET (69810-01) ON THE RIGHT SIDE IS PROVIDED.

## WEIGHT AND BALANCE

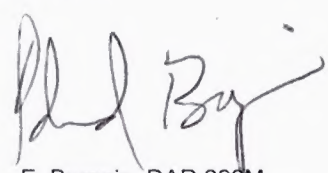
ITEM	DESCRIPTION	WEIGHT (LB)	LONGITUDINAL		LATERAL	
			ARM (IN)	MOMENT (LB-IN)	ARM (IN)	MOMENT (LB-IN)
01	CARGO BASKET INSTALLATION (CARGO BASKET AND MOUNTING PROVISIONS)	64.9	113.9	7390	30.3	1966
	CARGO	200 MAX	114.1	22820	38.5	7700

APPROVALS		DATE		<b>AERO DESIGN LTD.</b> CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M 2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net			
DRAWN: JEFF CLARKE		17 APR 2006					
CHECKED: E. BURGOIN							
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS                      ANGLES X.XXX ±0.010                      ±1/2" X.XX ±0.03 X.X ±0.1				<b>BELL 407</b> <b>QUICK RELEASE CARGO BASKET</b> <b>INSTALLATION</b>			
NOT TO SCALE		DWG. SIZE	DWG. NO.	REV.			
SHEET 2 OF 2		A4	70101	3			

# DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION										
<b>INSTALLATION DOCUMENTS</b>												
70101	Quick Release Cargo Basket Installation	2										
ICA698.90	Instructions for Continued Airworthiness	1										
FMS701.90	Flight Manual Supplement	1										
SI698.91	Service Instructions – Sliding Door Modification	0										
<b>FABRICATION DOCUMENTS</b>												
DCL698-1	Document Control List for Quick Release Cargo Basket	1										
DCL698-2	Document Control List for Beams	2										
<b>ENGINEERING DOCUMENTS</b>												
<table border="1"> <tr> <td rowspan="3"> <b>APPROVAL:</b>              Transport Canada            E. BURGOIN            DAR 20CM              APPROVED            By <i>[Signature]</i>            Appr'l No. 5800-48            Appr'l Date 08 DEC 2000            Issue No. 6            Issue Date 30 JAN 2008            Revised 19 SEPT 2008         </td> <td>           ORIGINAL DATE:            10 May, 2006              REVISION DATE:            23 September, 2008         </td> <td colspan="2"> <b>AERO DESIGN LTD.</b>            2013 – 39<sup>th</sup> Ave NE, Calgary, Alberta, T2E 6R7            Ph. (403) 250-8027            Fax. (403) 250-8333         </td> </tr> <tr> <td>           SHEET 1 OF 1         </td> <td colspan="2"> <b>Bell 407</b>  <b>Quick Release Cargo Basket</b>  <b>Installation</b> </td> </tr> <tr> <td colspan="2"> <b>DCL701</b> </td> <td>           Rev.  <b>2</b> </td> </tr> </table>			<b>APPROVAL:</b>  Transport Canada E. BURGOIN DAR 20CM  APPROVED By <i>[Signature]</i> Appr'l No. 5800-48 Appr'l Date 08 DEC 2000 Issue No. 6 Issue Date 30 JAN 2008 Revised 19 SEPT 2008	ORIGINAL DATE: 10 May, 2006  REVISION DATE: 23 September, 2008	<b>AERO DESIGN LTD.</b> 2013 – 39 <sup>th</sup> Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333		SHEET 1 OF 1	<b>Bell 407</b> <b>Quick Release Cargo Basket</b> <b>Installation</b>		<b>DCL701</b>		Rev. <b>2</b>
<b>APPROVAL:</b>  Transport Canada E. BURGOIN DAR 20CM  APPROVED By <i>[Signature]</i> Appr'l No. 5800-48 Appr'l Date 08 DEC 2000 Issue No. 6 Issue Date 30 JAN 2008 Revised 19 SEPT 2008	ORIGINAL DATE: 10 May, 2006  REVISION DATE: 23 September, 2008	<b>AERO DESIGN LTD.</b> 2013 – 39 <sup>th</sup> Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333										
	SHEET 1 OF 1	<b>Bell 407</b> <b>Quick Release Cargo Basket</b> <b>Installation</b>										
	<b>DCL701</b>		Rev. <b>2</b>									

## FORM AE-100

DEPARTMENT OF TRANSPORT STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS		AE-100 No.: AE701 Initial Issue Date: 25 May, 2006  Revision: 2 Revision Date: 23 September, 2008  Approval No.: SH00-48  Delegation No.: 290M Delegate Name: E. Burgoin Classification of Designee: Employer: AERO Design Ltd.	
Aircraft Mfr: Bell Aircraft Model: 407 Registration: All Eligible	Model Type Airplane <input type="checkbox"/> Helicopter <input checked="" type="checkbox"/> Appliance <input type="checkbox"/> Component <input type="checkbox"/>		
LIST OF APPROVED REPORTS AND DATA			
Document Number		Document Title	Compliance Status
DCL701 SI698.91	Revision 2 Revision 0	Document Control List and all documents referred to therein Service Instructions - Sliding Door Modification	
		DATA APPROVED BY TRANSPORT CANADA	
CERTIFICATION  UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED Nil HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIREMENTS.			
I THEREFORE <input type="checkbox"/> RECOMMEND FOR APPROVAL OF THESE DATA <input checked="" type="checkbox"/> APPROVE THESE DATA			
 E. Burgoin, DAR 290M			



# DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
<b>INSTALLATION DOCUMENTS</b>		
70101	Quick Release Cargo Basket Installation	2
ICA698.90	Instructions for Continued Airworthiness	1
FMS701.90	Flight Manual Supplement	1
<b>FABRICATION DOCUMENTS</b>		
DCL698-1	Document Control List for Quick Release Cargo Basket	1
DCL698-2	Document Control List for Beams	2
<b>ENGINEERING DOCUMENTS</b>		
<b>APPROVAL:</b>		
 <div style="display: flex; justify-content: space-between;"> <div> <b>Transport Canada</b>  <b>AIRCRAFT CERTIFICATION DIVISION</b>  <b>APPROVED</b>  By <u>D.S. [Signature]</u>  App'l No. <u>5400-48</u>  App'l Date <u>00-12-08</u>  Issue No. <u>6</u>  Issue Date <u>08-01-30</u>  <small>YY-MM-DD</small> </div> <div> <b>Transport Canada</b> </div> </div>	ORIGINAL DATE: 10 May, 2006  REVISION DATE: 28 September, 2007	<b>AERO DESIGN LTD.</b> 2013 - 39 <sup>th</sup> Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333
	SHEET 1 OF 1	<b>Bell 407</b> <b>Quick Release Cargo Basket</b> <b>Installation</b>
	<b>DCL701</b>	Rev.  <b>1</b>

## BELL 407

### ROTORCRAFT FLIGHT MANUAL SUPPLEMENT for the INSTALLATION of the AERO DESIGN QUICK RELEASE CARGO BASKET

Supplemental Type Certificate No. SH00-48

Sections I, II, III and IV of this document comprise the Transport Canada Approved sections of this Flight Manual Supplement. Compliance with Section I, Limitations, is mandatory.

Section V and any subsequent sections if present are Unapproved and are provided for information only.

The information and data contained in this Flight Manual Supplement supersede or supplement that contained in the basic Approved Flight Manual for the Bell 407 when fitted with the Quick Release Cargo Basket Installation. For limitations, procedures and performance not listed in this Flight Manual Supplement, refer to the Approved Flight Manual and other approved Flight Manual Supplements.





### Table of Contents

I	Limitations	3
II	Normal Procedures	3
III	Emergency Procedures	3
IV	Performance	3
V	Weight and Balance	4
VI	Installation / removal instructions	6

### Record of Revisions

Revision	Issue Date	Pages Revised	Date Inserted	By
0	05 May, 2006	None		

## I LIMITATIONS

1. The maximum load in the AERO Design Ltd. Quick Release Cargo Basket is 200 lb. (90.9 kg).
2. Flight operations limited to VFR conditions with AERO Design Ltd. Cargo Basket installed.
3. Maximum lateral or rearward speed limited to 25 KIAS.
4. Maximum winds from aft quadrants limited to 25 KIAS for takeoff, landing or hover flight.
5.  $V_{NE}$  is 140 KIAS except when the  $V_{NE}$  of the basic rotorcraft is more restrictive, in which case the lower  $V_{NE}$  applies.

## II NORMAL PROCEDURES

1. Pre-flight inspections:
  - a) Ensure that all cargo stored in the cargo basket does not extend outside the basket, is properly tied down and secured for flight.
  - b) Ensure that the lid of cargo basket is closed and secured.
  - c) Ensure the basket is locked in position on the beams. Pull up on the forward and aft end of the basket to check.

### CAUTION

It is possible to exceed the lateral centre of gravity limits of the rotorcraft under some loading conditions. Pilots must ensure that lateral C of G is within limits when loading the basket.

## III EMERGENCY PROCEDURES

No change from basic Approved Flight Manual.

### CAUTION:

The rotorcraft glide angle is steeper than that of the basic helicopter when the AERO Design Ltd. Cargo Basket is installed.

## IV PERFORMANCE

Climb performance may be reduced by up to 200 fpm.

Cruise speeds are reduced by approximately 10 kts. (11 mph).



## V WEIGHT AND BALANCE

1. The following weight and balance is for the low mounted quick release cargo basket configuration, installed in accordance with drawing 70101.

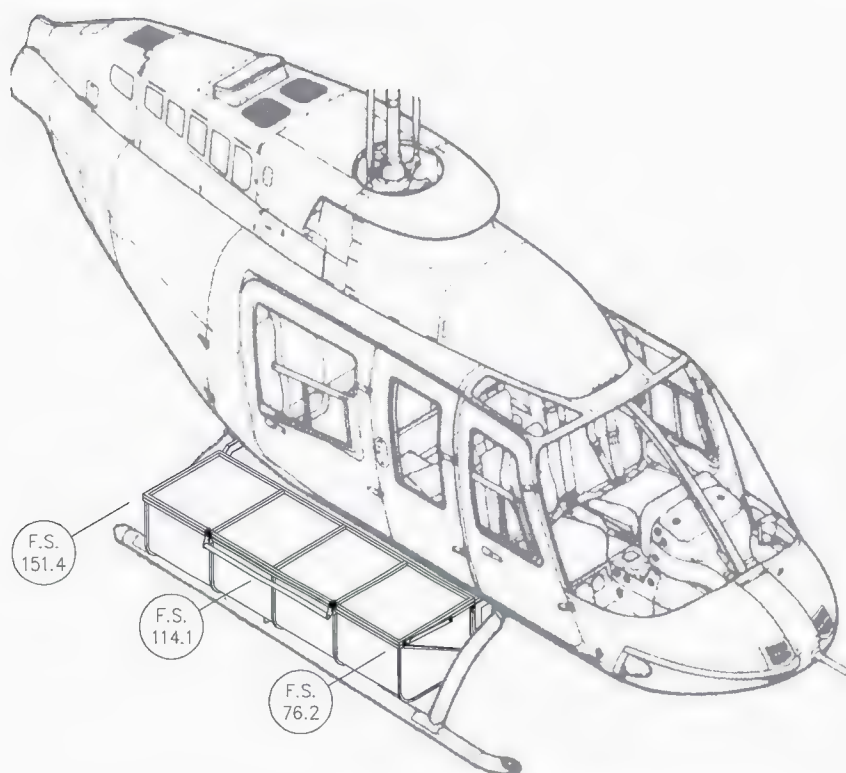


Figure 1 – Low Mounted Quick Release Cargo Basket Configuration

## Low Mounted Quick Release Cargo Basket Configuration

Item	Weight	Longitudinal		Lateral	
		Arm	Moment	Arm	Moment
Cargo Basket Only <sup>1</sup>	45.0 lb	114.1 in	5134 in*lb	38.5 in	1733 in*lb
	20.4 kg	2898 mm	59 122 mm*kg	978 mm	19 949 mm*kg
Cargo <sup>2</sup> (MAX)	200 lb	114.1 in	22 820 in*lb	38.5 in	7700 in*lb
	90.9 kg	2898 mm	263 467 mm*kg	978 mm	88 900 mm*kg

<sup>1</sup> Weight and balance is for Cargo Basket only. Mounting beams and attachment provisions are not included since they should have been included in the basic rotorcraft weight and balance at time of initial installation.

<sup>2</sup> Longitudinal and Lateral moment arms are given only for the center of the Cargo Basket. Due to the length of the basket, some loading arrangements may require that actual moment arms be measured, to determine the correct moments about the center of gravity.

**CAUTION:**

It is possible to exceed lateral CG limits in some configurations. For example, with one pilot, no passengers, fuel tanks half empty, and the AERO Design Ltd. cargo basket loaded with 200 pounds of cargo, the Lateral CG of the rotorcraft may be out of limits.



## VI INSTALLATION / REMOVAL INSTRUCTIONS

The basket and beams are installed in accordance with drawing 70101. Removal of the basket leaving the beams in place is an approved configuration for flight. Logbook entry indicating installation or removal of basket and weight and balance amendment is required when basket is installed or removed.

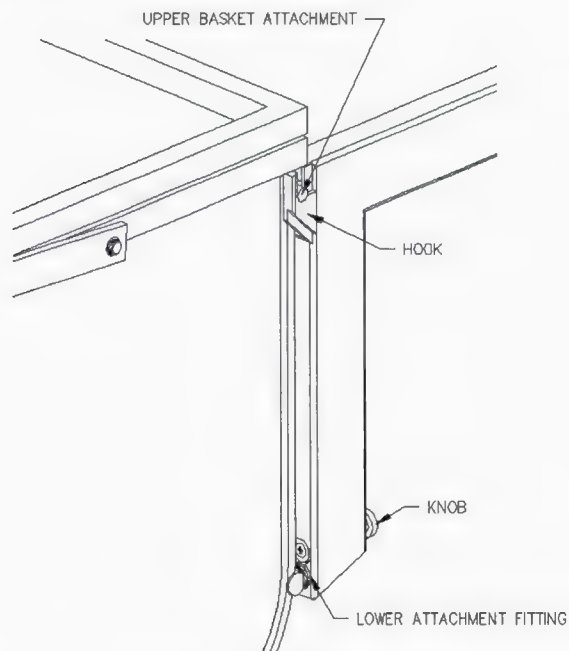


Figure 2 – Basket Attachment

1. Installation - Refer to Figure 2.
  1. Set basket upper attachment into hook on forward and aft beams.
  2. At forward end of basket, lift until lower attachment fitting can enter keyway. Push stop in and slide fitting down into keyway. Push down until locked. Repeat for aft end.
2. Removal - Refer to Figure 2.
  1. Pull knob at bottom end of forward beam and lift basket until lower attachment fitting is free of keyway. Keep upper basket attachment in hook on beam. Repeat for aft end.
  2. Lift basket off hooks and remove from helicopter.

1 November, 2007

Transport Canada  
Aircraft Certification Division  
11<sup>th</sup> Floor, Canada Place  
9700 Jasper Avenue  
Edmonton, Alberta  
T5J 4E6

Attn: Jack Staal

Your File # : SH00-48

Our File # : Various

Re: Cargo Basket Approval Revisions

Jack,

Please find attached the following documents related to this project:

Supplemental Type Certificate (draft)	✓SH00-48	Issue 6
(High Quick Release Basket)		
Document Control List	✓DCL766-1	Revision 0
Document Control List	✓DCL766-2	Revision 0
AE 100 Form	✓AE766-1	Revision 0
AE 100 Form	✓AE766-2	Revision 0
Compliance Program	✓CP766	Revision 0
Modification Approval Application Form	✓MOD766	Revision 0
Engineering Report	✓ER766.01	Revision 0
Test Plan	✓TP766.02	Revision 0
Instructions for Continued Airworthiness	✓ICA766.90	Revision 0
MSI 53 Review	✓	
Flight Manual Supplement (407)	✓FMS766.91	Revision 0
Flight Manual Supplement (206L)	✓FMS766.92	Revision 0
Cargo Basket Installation	✓76601	Revision 0
Cargo Basket Assembly	✓76610	Revision 0
Cargo Basket Body	✓76611	Revision 0
Basket Components - End Hoop Assembly	✓76621	Revision 0
Basket Comp. - Attach Hoop Assembly	✓76622	Revision 0
Basket Components - Hoop	✓76623	Revision 0
Basket Components - Placard	✓76625	Revision 0
Support Beams	✓76630	Revision 0
Handle Assembly	✓36255	Revision 1
Handle Bar Assembly	✓36261	Revision 3
Handle Bracket Assembly	✓36262	Revision 1
Handle Lever	✓36271	Revision 1
Basket Bracket	✓36272	Revision 1
Lid Bracket	✓36273	Revision 1
Bushing	✓36274	Revision 1
Bushing	✓36275	Revision 2



**(407 Attachment Provisions)**

Document Control List

AE100 Form

Block Fabrication

✓ DCL700 Revision 1  
✓ AE700 Revision 1  
✓ 60620 Revision 1

**(Low Fixed Basket)**

Document Control List

Document Control List

AE100 Form

Cargo Basket Installation (206L)

Support Beams (Pocketed Aluminum)

Support Beams (Steel)

Engineering Report - Pocketed Beams

Instructions for Continued Airworthiness

Flight Manual Supplement

Document Control List

AE100 Form

Cargo Basket Installation (407)

Flight Manual Supplement

✓ DCL492 Revision 6  
✓ DCL492-1 Revision 1  
✓ AE492 Revision 2  
✓ 49201 Revision 3  
✓ 49221 Revision 3  
✓ 49222 Revision 2  
✓ ER492.04 Revision 1  
✓ ICA492.90 Revision 1  
✓ FMS492.01 Revision 2  
✓ DCL606 Revision 3  
✓ AE606 Revision 2  
60601 Revision 2  
✓ FMS606.01 Revision 2

**(Quick Release Basket Installation)**

Document Control List

AE100 Form

Cargo Basket Installation (407)

Flight Manual Supplement

Document Control List

AE100 Form

Cargo Basket Installation (206L)

Flight Manual Supplement

✓ DCL701 Revision 1  
✓ AE701 Revision 1  
✓ 70101 Revision 2  
✓ FMS701.90 Revision 1  
✓ DCL702 Revision 1  
✓ AE702 Revision 1  
✓ 70201 Revision 2  
✓ FMS702.90 Revision 1

**(Quick Release Basket Fabrication)**

Document Control List

AE100 Form

Cargo Basket Assembly

Basket Body Assembly

Basket Components - End Hoop

Basket Components - Aft Hoop

Instructions for Continued Airworthiness

Document Control List

AE100 Form

Forward Beam Fabrication

Aft Beam Fabrication

Engineering Report

✓ DCL698-1 Revision 1  
✓ AE698-1 Revision 1  
✓ 69810 Revision 2  
✓ 69811 Revision 2  
✓ 69821 Revision 1  
✓ 69822 Revision 0  
✓ ICA698.90 Revision 1  
✓ DCL698-2 Revision 2  
✓ AE698-2 Revision 1  
✓ 69830 Revision 2  
✓ 69831 Revision 2  
✓ ER698.04 Revision 0

**AERO DESIGN LTD.**

2013 - 39 Avenue N.E., Calgary, Alberta, T2E 6R7

Tei 403-250-8027

Fax 403-250-8333

info@aerodesign.ca

Please note the request for a revision to the FAA STC after the Canadian approval is issued.

Regards,

A handwritten signature in black ink, appearing to read 'E. Burgoin', written over the printed name.

E. Burgoin, P.Eng, DAR 290M

Encl.

# FORM AE-100

DEPARTMENT OF TRANSPORT STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS		AE-100 No.: AE701 Initial Issue Date: 25 May, 2006  Revision: 1 Revision Date: 1 November, 2007  Approval No.: SH00-48  Delegation No.: 290M Delegate Name: E. Burgoin Classification of Designee: AERO Design Ltd Employer:
Aircraft Mfr: Bell Aircraft Model: 407 Registration: All Eligible	Model Type Airplane <input type="checkbox"/> Helicopter <input checked="" type="checkbox"/> Appliance <input type="checkbox"/> Component <input type="checkbox"/>	
LIST OF APPROVED REPORTS AND DATA		
Document Number	Document Title	Compliance Status
DCL701 70101 DCL698-1 DCL698-2  FMS701.90 ICA698.90	Revision 1 Revision 2 Revision 1 Revision 2  Revision 1 Revision 1	Document Control List and all documents referred to therein Quick Release Cargo Basket Installation Document Control List for Quick Release Cargo Basket Document Control List for Beams  Flight Manual Supplement (only unapproved sections revised) Instructions for Continued Airworthiness
DATA APPROVED BY TRANSPORT CANADA		
CERTIFICATION		
UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED Nil HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIREMENTS.		
I THEREFORE <input type="checkbox"/> RECOMMEND FOR APPROVAL OF THESE DATA <input checked="" type="checkbox"/> APPROVE THESE DATA		
 E. Burgoin, DAR 290M		



# DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
<b>INSTALLATION DOCUMENTS</b>		
70101	Quick Release Cargo Basket Installation	0
ICA698.90	Instructions for Continued Airworthiness	0
FMS701.90	Flight Manual Supplement	0
<b>FAIRICATION DOCUMENTS</b>		
DCL698-1	Document Control List for Quick Release Cargo Basket	0
DCL698-2	Document Control List for Beams	0
<b>ENGINEERING DOCUMENTS</b>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p><b>APPROVAL:</b></p> <div style="border: 1px solid black; padding: 5px;"> <div style="display: inline-block; text-align: center;"> <div>Transport Canada</div> <div>Transports Canada</div> </div> </div> <p style="text-align: center;"><b>AIRCRAFT CERTIFICATION DIVISION</b></p> <p style="text-align: center;"><b>APPROVED</b></p> <p>Ely <u><i>D. S. Austin</i></u></p> <p>App'l No. <u>SH00-48</u></p> <p>App'l Date <u>02-12-08</u></p> <p>Issue No. <u>5</u></p> <p>Issue Date <u>06-06-09</u></p> <p style="text-align: center; font-size: small;">YY-MM-DD</p> </div> <div style="width: 35%;"> <p>ORIGINAL DATE: 10 May, 2008</p> <p>REVISION DATE:</p> </div> <div style="width: 35%; text-align: center;"> <p><b>AERO DESIGN LTD.</b></p> <p>2013 - 39<sup>th</sup> Ave NE, Calgary, Alberta, T2E 6R7</p> <p>Ph. (403) 250-8027</p> <p>Fax. (403) 250-8333</p> </div> </div>		
SHEET 1 OF 1		<p><b>Bell 407</b></p> <p><b>Quick Release Cargo Basket Installation</b></p>
DCL701		<p>Rev.</p> <p style="font-size: 2em; font-weight: bold;">0</p>

AERO DESIGN LTD.

FMS701.90

## BELL 407

### ROTORCRAFT FLIGHT MANUAL SUPPLEMENT for the INSTALLATION of the AERO DESIGN QUICK RELEASE CARGO BASKET

Supplemental Type Certificate No. SH00-48

Sections I, II, III and IV of this document comprise the Transport Canada Approved sections of this Flight Manual Supplement. Compliance with Section I, Limitations, is mandatory.

Section V and any subsequent sections if present are Unapproved and are provided for information only.

The information and data contained in this Flight Manual Supplement supersede or supplement that contained in the basic Approved Flight Manual for the Bell 407 when fitted with the Quick Release Cargo Basket Installation. For limitations, procedures and performance not listed in this Flight Manual Supplement, refer to the Approved Flight Manual and other approved Flight Manual Supplements.



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05 May, 2006

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TRANSPORT CANADA APPROVED

AERO DESIGN LTD.

FMS701.90

### Table of Contents

I	Limitations	3
II	Normal Procedures	3
III	Emergency Procedures	3
IV	Performance	3
V	Weight and Balance	4
VI	Installation / removal instructions	6

### Record of Revisions

Revision	Issue Date	Pages Revised	Date Inserted	By
0	05 May, 2006	None		

Revision 0  
05 May, 2006

Page 2



## I LIMITATIONS

1. The maximum load in the AERO Design Ltd. Quick Release Cargo Basket is 200 lb. (90.9 kg).
2. Flight operations limited to VFR conditions with AERO Design Ltd. Cargo Basket installed.
3. Maximum lateral or rearward speed limited to 25 KIAS.
4. Maximum winds from aft quadrants limited to 25 KIAS for takeoff, landing or hover flight.
5.  $V_{NE}$  is 140 KIAS except when the  $V_{NE}$  of the basic rotorcraft is more restrictive, in which case the lower  $V_{NE}$  applies.

## II NORMAL PROCEDURES

1. Pre-flight inspections:
  - a) Ensure that all cargo stored in the cargo basket does not extend outside the basket, is properly tied down and secured for flight.
  - b) Ensure that the lid of cargo basket is closed and secured.
  - c) Ensure the basket is locked in position on the beams. Pull up on the forward and aft end of the basket to check.

### CAUTION

It is possible to exceed the lateral centre of gravity limits of the rotorcraft under some loading conditions. Pilots must ensure that lateral C of G is within limits when loading the basket.

## III EMERGENCY PROCEDURES

No change from basic Approved Flight Manual.

### CAUTION:

The rotorcraft glide angle is steeper than that of the basic helicopter when the AERO Design Ltd. Cargo Basket is installed.

## IV PERFORMANCE

Climb performance may be reduced by up to 200 fpm.

Cruise speeds are reduced by approximately 10 kts. (11 mph).

Revision 0  
05 May, 2006

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TRANSPORT CANADA APPROVED

## V WEIGHT AND BALANCE

1. The following weight and balance is for the low mounted quick release cargo basket configuration, installed in accordance with drawing 70101.

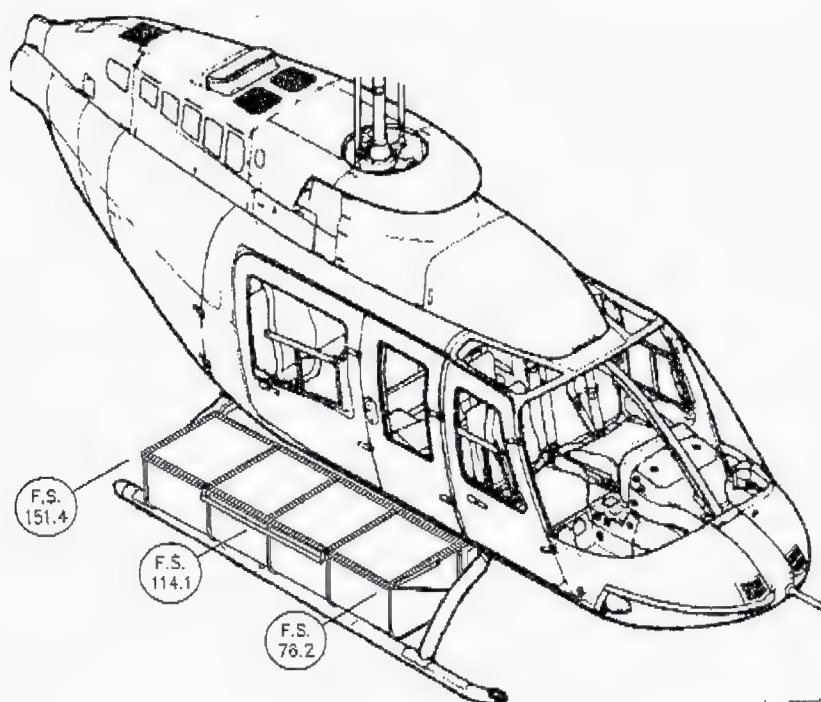


Figure 1 – Low Mounted Quick Release Cargo Basket Configuration

AERO DESIGN LTD.

FMS701.90

## Low Mounted Quick Release Cargo Basket Configuration

Item	Weight	Longitudinal		Lateral	
		Arm	Moment	Arm	Moment
Cargo Basket Only <sup>1</sup>	45.0 lb	114.1 in	5134 in*lb	38.5 in	1733 in*lb
	20.4 kg	2898 mm	59 122 mm*kg	978 mm	19 949 mm*kg
Cargo <sup>2</sup> (MAX)	200 lb	114.1 in	22 820 in*lb	38.5 in	7700 in*lb
	90.9 kg	2898 mm	263 467 mm*kg	978 mm	88 900 mm*kg

<sup>1</sup> Weight and balance is for Cargo Basket only. Mounting beams and attachment provisions are not included since they should have been included in the basic rotorcraft weight and balance at time of initial installation.

<sup>2</sup> Longitudinal and Lateral moment arms are given only for the center of the Cargo Basket. Due to the length of the basket, some loading arrangements may require that actual moment arms be measured, to determine the correct moments about the center of gravity.

**CAUTION:**

It is possible to exceed lateral CG limits in some configurations. For example, with one pilot, no passengers, fuel tanks half empty, and the AERO Design Ltd. cargo basket loaded with 200 pounds of cargo, the Lateral CG of the rotorcraft may be out of limits.

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05 May, 2006

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## VI INSTALLATION / REMOVAL INSTRUCTIONS

The basket and beams are installed in accordance with drawing 70101. Removal of the basket leaving the beams in place is an approved configuration for flight. Logbook entry indicating installation or removal of basket and weight and balance amendment is required when basket is installed or removed.

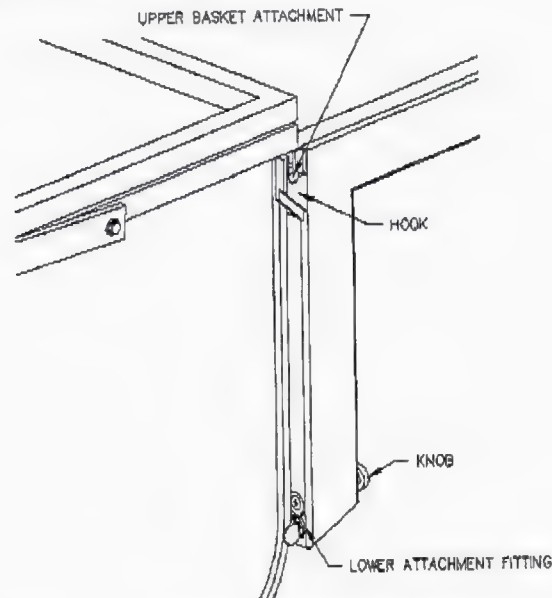


Figure 2 – Basket Attachment

1. Installation - Refer to Figure 2.
  1. Set basket upper attachment into hook on forward and aft beams.
  2. At forward end of basket, lift until lower attachment fitting can enter keyway. Push stop in and slide fitting down into keyway. Push down until locked. Repeat for aft end.
2. Removal - Refer to Figure 2.
  1. Pull knob at bottom end of forward beam and lift basket until lower attachment fitting is free of keyway. Keep upper basket attachment in hook on beam. Repeat for aft end.
  2. Lift basket off hooks and remove from helicopter.

# FORM AE-100

<b>DEPARTMENT OF TRANSPORT</b> <b>STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT</b> <b>COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS</b>		<b>AE-100 No.:</b> AE701 <b>Initial Issue Date:</b> 25 May, 2006  <b>Revision:</b> 0 <b>Revision Date:</b>  <b>Approval No.:</b> SH00-48  <b>Delegation No.:</b> 290M <b>Delegate Name:</b> E. Burgoin <b>Classification of Designee:</b> <b>Employer:</b> AERO Design Ltd.	
<b>Aircraft Mfr:</b> Bell <b>Aircraft Model:</b> 407 <b>Registration:</b> All Eligible		<b>Model Type</b> Airplane <input type="checkbox"/> Helicopter <input checked="" type="checkbox"/> Appliance <input type="checkbox"/> Component <input type="checkbox"/>	
<b>LIST OF APPROVED REPORTS AND DATA</b>			
<b>Document Number</b>	<b>Revision</b>	<b>Document Title</b>	<b>Compliance Status</b>
DCL701 70101 DCL698-1 DCL698-2	Revision 0 Revision 0 Revision 0 Revision 0	Document Control List and all documents referred to therein Quick Release Cargo Basket Installation Document Control List for Quick Release Cargo Basket Document Control List for Beams	
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FMS701.90 ICA698.90	Revision 0 Revision 0	Flight Manual Supplement Instructions for Continued Airworthiness	
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<b>FABRICATION DOCUMENTS</b>		
DCL698-1	Document Control List for Quick Release Cargo Basket	0
DCL698-2	Document Control List for Beams	0
<b>ENGINEERING DOCUMENTS</b>		
APPROVAL:	ORIGINAL DATE: 10 May, 2006 REVISION DATE:	<b>AERO DESIGN LTD.</b> 2013 – 39 <sup>th</sup> Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333
	SHEET 1 OF 1	<b>Bell 407</b> <b>Quick Release Cargo Basket</b> <b>Installation</b>
	<b>DCL701</b>	Rev. <b>0</b>



## BELL 407

### **ROTORCRAFT FLIGHT MANUAL SUPPLEMENT** for the **INSTALLATION of the AERO DESIGN** **QUICK RELEASE CARGO BASKET**

Supplemental Type Certificate No. SH00-48

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0	05 May, 2006	None		

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It is possible to exceed the lateral centre of gravity limits of the rotorcraft under some loading conditions. Pilots must ensure that lateral C of G is within limits when loading the basket.

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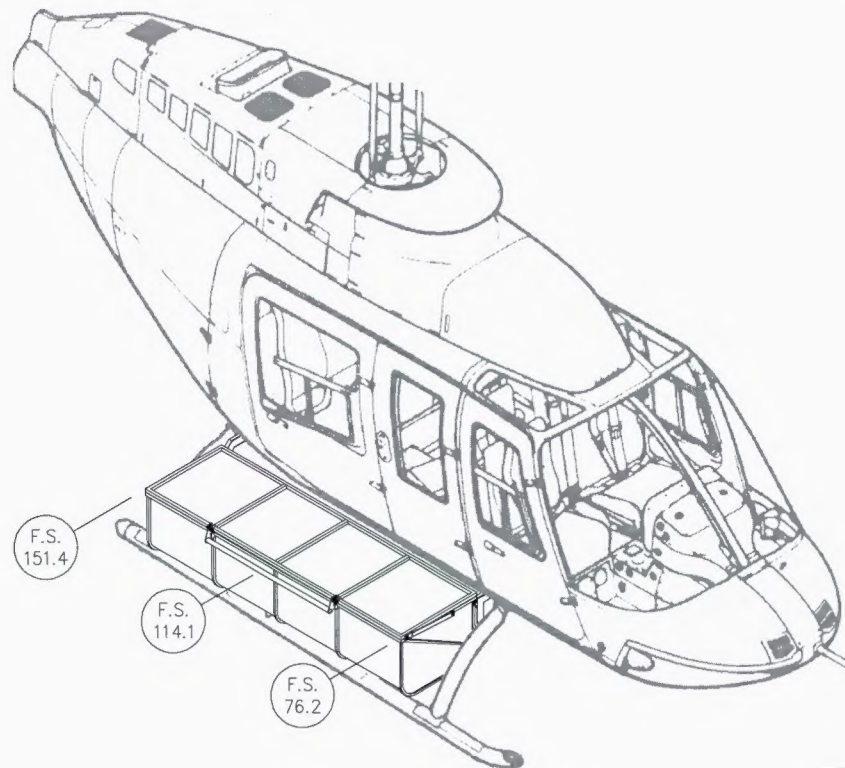


Figure 1 – Low Mounted Quick Release Cargo Basket Configuration



## Low Mounted Quick Release Cargo Basket Configuration

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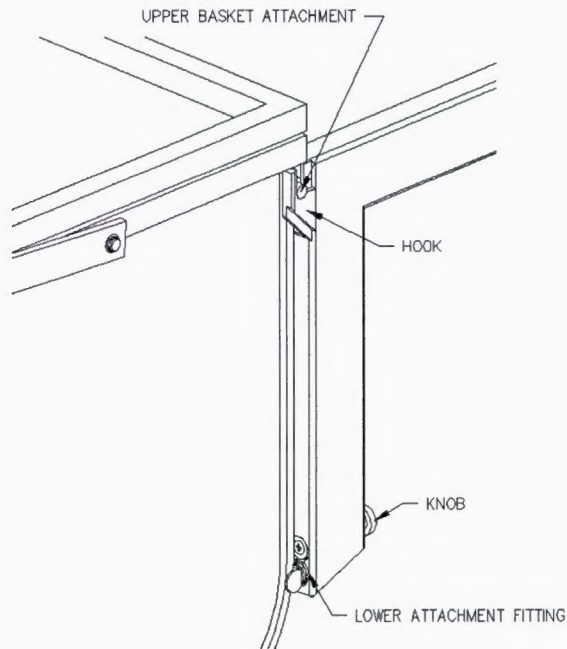


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